

**REMARKS**

This paper is filed in response to the final Office Action dated September 28, 2002. Claims 1-28 are pending. In the Office Action of September 28, 2002, the examiner rejected claims 1-12, 14-17, 20 and 23-28 under 35 U.S.C. § 103(a) as being unpatentable over Zellner et al., U.S. Patent No. 6,026,289 ("Zellner") in view of Tayloe et al., U.S. Patent 5,790,951 ("Tayloe"); and rejected claims 13, 18-19, and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Zellner in view of Tayloe and further in view of Dorenbosch, U.S. Patent No. 5,959,546.

The Examiner's rejections are traversed below.

**Summary of the Invention**

The present invention provides a method and apparatus for providing informative broadcast services in a wireless communication system. The wireless communication system includes a plurality of base stations, each serving a plurality of users via a plurality of communication channels. According to the invention, an alerting message is sent to wireless communication devices associated with the wireless network. The alerting message identifies a communication channel on which a broadcast message will be sent. The alerting message indicates to a user that a broadcast message is available. After the alerting message is given, the broadcast message is sent over the communication channel. The alerting message and the broadcast message are separate communications. After receiving the alerting message, the user may then decide to receive the broadcast message. Alternatively, the user may ignore the broadcast or toggle between the broadcast and an existing call. The broadcast message is information for the user, such as a weather broadcast, emergency bulletin, news, sports or the like.

Claims 1-12, 14-17, 20 and 23-28 are Patentable Over Zellner and Tayloe

The Examiner rejected claims 1-12, 14-17, 20 and 23-28 under 35 U.S.C. § 103(a) as being unpatentable over Zellner in view of Tayloe. The Applicant respectfully traverses the rejection with respect to claims 1-12, 14-17, 20 and 23-28 on the basis that these claims include certain novel limitations that are not disclosed by Zellner or Tayloe, either separately or in combination. In particular, as discussed further below, Zellner fails to disclose, at least, a means or method for initially alerting a user of a wireless unit of availability of a broadcast message prior to delivery of the broadcast message. Tayloe also fails to disclose, at least, a means or method for initially alerting a user of a wireless unit of availability of a broadcast message prior to delivery of the broadcast message.

According to the Examiner, with reference to claim 1, Zellner discloses all the elements of the claim, except that Zellner does not disclose "the alert message including the identity of one of said plurality of communication channels and the alert message indicating to said plurality of users that a broadcast message is available." According to the Examiner, Tayloe provides the missing element and it would have been obvious to combine Zellner and Tayloe.

The Applicant disagrees. In particular, both Zellner and Tayloe lack the level of user notification and interaction contemplated by the claims of the present invention. And, there is no motivation to combine Zellner and Tayloe.

Zellner discloses a system and method for delivering broadcast information services from broadcasters to remote users over shared channels in a cellular communication system. Zellner discloses two cases wherein a broadcast message is sent. In the first case, a broadcaster of the informational audio service initiates calls to each remote receiver of the broadcast data. In the second case, a call request is initiated by a remote user and the user is placed on a shared

channel that includes the broadcast message. Notably, Zellner does not disclose, teach or suggest, alerting a user of the availability of a broadcast message, prior to actual transmission of the broadcast message. In the second case, wherein the user initiates or joins a broadcast channel, the user apparently dials into a broadcast service and the mobile switching center directs the user's wireless device to the shared channel that includes the broadcast message. Zellner does not disclose alerting the user's wireless device to the availability of the broadcast message prior to the user joining the broadcast channel. In the first case where a broadcaster initiates service, the broadcaster apparently calls the remote users who are to receive the broadcast. The remote users are then connected to the broadcast upon answering the call. Zellner does not disclose announcing the availability of the broadcast message prior to transmission of the broadcast message. It appears that the broadcast message of Zellner operates much like a normal call, at least without any user being made aware that the call is a broadcast message.

Taylor addresses problems in a synchronous communication system. See, Taylor, column 1, line 55-column 2, line 21. In a synchronous communication system, a non-reference communication element, (*i.e.*, one that must respond to the synchronous timing, rather than one that sets the synchronous timing) must advance timing of transmissions in order to compensate for propagation delays to insure the transmission is received at the proper timing at a reference communication element (*i.e.*, the element that sets the synchronous timing). Unfortunately, this advance communication may be timed such that its transmission interferes with another non-reference communication element nearby that is in the process of receiving a signal transmitted by the reference communication element. In other words, a first co-located non-reference communication element is prohibited from receiving a communication due to the overbearing nature of the transmit signal from a co-located second non-reference

communication element. This interference may cause a loss of data. But, more importantly, control transmissions, such as those directing the communication element to critical operational information, such as the destination of a call, paging data, or system data necessary to establish a call. The critical operational information specifically mentioned in Tayloe is the location of a broadcast channel, which location is typically transmitted over a ring/alert paging channel.

The solution proposed by Tayloe to solve the problem is summarized at column 6, lines 35-55 therein. According to Tayloe, when there are no non-reference communication elements transmitting, and hence, no chance of interference, the communication elements monitor the ring/alert paging channel directly for the location of the broadcast channel. However, if a co-located non-reference communication element is transmitting and there is the possibility for interference, then the co-located, non-transmitting, non-reference communication elements receive the location of the broadcast channel via an alternate method. In particular, according to the alternate method, the mobile exchange unit extracts the location of the broadcast channel from a candidate hand-off list sent to the transmitting non-reference communication element. The location of the broadcast channel is then sent directly to the non-transmitting, non-reference communications elements, so that those elements can locate and monitor the broadcast channel for ring alert data and paging data.

Tayloe is a low level protocol used by a communication element to monitor a channel for ring/alert, paging, and other control information. The user of the communication element has no control over and does not interact with the broadcast channel used in Tayloe for control information. The broadcast channel mentioned in Tayloe is not for a user receiving a broadcast, such as a weather broadcast, emergency bulletin, news or sports. Rather, the broadcast channel of Tayloe is for the communication element to tune to receive ring/alert

and other control information, without user interaction and without direct notification to a user.

In contrast to Zellner, Tayloe and the prior art, the present invention advantageously puts a user in control of receiving broadcast messages, such as weather broadcasts, news, sports, emergency bulletins or the like. This is accomplished by first alerting the user to the availability of a broadcast message. Then the broadcast message is sent over a channel that the user can access at the users option. Advantageously, the broadcaster need not know which devices/users to contact for a broadcast message prior to sending the broadcast. This allows the broadcaster to address a much wider audience than that contemplated by Zellner. Zellner and Tayloe, separately and in combination, lack, at least, notification to a user via the alerting message, of a broadcast message. Hence, claims 1 is patentable over Zellner in view of Tayloe.

Furthermore, and alternatively, claim 1 is not obvious because there is no motivation to combine Tayloe and Zellner. Tayloe is addressed to a low level protocol for a communication device to receive control information. Tayloe is in no way concerned with the type of broadcast messages contemplated by Zellner and the present invention. Therefore, there is no motivation to combine Tayloe and Zellner as asserted by the Examiner.

Each of independent claims 12 and 24 requires an alert message indicating to a user a subsequent broadcast message. As discussed above, with respect to claim 1, Zellner and Tayloe do not disclose, suggest or teach, at least this novel element of the present invention. Additionally, Zellner and Tayloe do not disclose, teach or suggest an alert message including a dialing instruction by which users may request a broadcast message, as recited in claim 27. Hence, independent claims 12, 24 and 27 are patentable. In addition Zellner and Tayloe do not make these claims obvious, due in part, to their lack of teaching on a method to alert a user to an imminent broadcast

broadcast message. The dependent claims 2-11, 13-23, 25-26 and 28 depend ultimately from one of the independent claims, and are patentable for at least the reasons given above for the independent claims.

In addition, claim 3 requires that the alert message include a permission parameter. Zellner checks for user authorization by a cell controller (Zellner, col. 4, lines 9-19). However, in Zellner, a permission parameter is not sent with an alert message for use by the wireless unit itself. Tayloe also does not include the permission parameter. Hence, claim 3 is patentable for this additional reason.

Claim 4 requires periodic transmission of the alert message. Zellner and Tayloe lack this element. Hence claim 4 is patentable for this additional reason.

Claims 5 and 6 require sending a further alert to indicate expiration of the channel and returning the channel for further use, respectively. Zellner and Tayloe lack these elements and claims 5 and 6 are patentable for these additional reasons.

Claim 13 requires a second alert message to indicate the end of a broadcast. Zellner and Tayloe do not disclose, teach or suggest this element, making claim 13 patentable over Zellner and Tayloe for this additional reason.

Claims 23 and 28 require means for blocking a reverse link associated with a broadcast transmission. Zellner discloses preventing quality checking on the reverse link of a broadcast transmission, but does not disclose, teach or suggest complete blocking of the reverse link. Tayloe fails to provide the missing teachings. Hence claims 23 and 28 are patentable for this additional reason.

#### The Claims Are Patentable Over Zellner, Tayloe and Dorenbosch

The Examiner rejected claims 13, 18-19, and 21-22 under 35 U.S.C. § 103(a) as being unpatentable over Zellner in view of Tayloe and further in view of Dorenbosch. According to the Examiner, Zellner

and Tayloe teach all the elements of the subject claims, except Zellner and Tayloe fail to teach or disclose: (1) receiving a second alerting message indicating that said broadcast message is over and for automatically restoring said wireless unit to said stored state upon receipt of said second alerting message (as recited in claim 13); (2) alerting comprises a user-audible and a user-visible signal (as recited in claims 18 and 19 or 22); and (3) selecting comprises a button separate from said keypad (as recited in claim 21). According to the Examiner, Dorenbosch teaches the elements missing in Zellner and Tayloe. The Examiner concludes that the claims are obvious in view of the combination of Zellner, Tayloe and Dorenbosch.

The Applicant disagrees with the Examiner's conclusion. First, even assuming a combination of Zellner, Tayloe and Dorenbosch is appropriate, such a combination still fails to disclose certain novel elements of the subject claims. Namely, a combination of Zellner, Tayloe and Dorenbosch fails to disclose first alerting the user to the availability of a broadcast message and then the broadcast message being sent over a channel that the user can access at the users option, as discussed above. In addition, Dorenbosch does not even address the problem solved by the present invention. Dorenbosch relates to selective call receiving through addressing. While some audible and visual alerting are mentioned in Dorenbosch, the context there is not applicable to the teachings of the present invention. Hence, there is no motivation for one of ordinary skill in the art to combine the references to address the problems solved by the present invention.

**CONCLUSION**

All pending claims are in condition for allowance. Allowance at an early date is solicited.

Respectfully submitted,



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